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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/588,072	06/05/2000	Ahmed Saifuddin	QCPA000320	8110

23696 7590 10/17/2003

Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
San Diego, CA 92121-1714

EXAMINER

TORRES, JOSEPH D

ART UNIT	PAPER NUMBER
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2133

DATE MAILED: 10/17/2003

16

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/588,072

Applicant(s)

SAIFUDDIN ET AL.

Examiner

Joseph D. Torres

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- ☐ Interview Summary (PTO-413) Paper No(s). _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other:

DETAILED ACTION

Claim Objections

1. In view of the Applicant's arguments in the current Amendment C of Paper No. 15, the Examiner withdraws the objections to the claims presented in the Office Action of Paper No. 13.

Response to Arguments

2. Applicant's arguments with respect to amended claims 9 and previously examined claims 10-34 filed 22 August 2003 have been fully considered but they are not persuasive.

The Applicant contends, "With respect to claim 9, Applicants respectfully submit that Kashida and Wright do not teach, disclose, or suggest all the limitations of claim 9. In particular, they do not teach or suggest the following element of claim 9:

'forming a frame comprising the plurality of information bits, the outer quality metric, and the inner quality metric, wherein the outer quality metric being used for protection of the plurality of information bits and the inner quality metric being used for protection of the at least one group of information bits.'"

The Examiner disagrees and asserts that Kashida explicitly teaches forming a block comprising the plurality of information bits, the outer quality metric, and the inner quality metric (Figure 9 in Kashida and col. 10, lines 6-19 teach the forming of blocks including

the inner and outer quality metrics), wherein the outer quality metric being used for protection of the plurality of information bits (col. 10, lines 6-19 in Kashida teach that the outer code is provided as protection for each information bit along the columns of the matrix in Figure 9) and the inner quality metric being used for protection of the at least one group of information bits (col. 10, lines 6-19 in Kashida teach that the inner code is provided as protection for each information bit along the rows of the matrix in Figure 9, hence is provided as protection for at least one group of information bits). Wright, in an analogous art, teaches a block error correction unit, which includes inner and outer parity code whereby the entire error correction block or error correction unit is also a frame.

The Applicant contends, "Applicants are unable to find any disclosure or suggestion by Wright regarding a frame that contains an outer quality metric for protection of the frame and at least one inner quality metric for protection of a portion of the frame". Wright explicitly teaches, "a first set of data cells (20); (b) forming a group of codewords by applying an outer code (24) to the first set of data cells (20), such that the number of codewords being proportional to the inner coding rate; (c) entering the group of codewords row wise (26) into an interleaving array; and (d) applying an inner code column wise (28) to the group of codewords, thereby forming a fixed size frame body (30)" [see Abstract and Figure 4 in Wright]. The Examiner asserts that the inner and outer codes are forward error correction codes (col. 1, lines 6-11, Wright), that the outer code specifically protects the data cells of the frame and the inner code protects groups

of columns of the interleaved array of outer coded data, hence Wright teaches a frame that contains an outer quality metric (an outer code) for protection of the frame (the outer code specifically protects the data cells of the frame, hence is an outer quality metric for protection of the frame) and at least one inner quality metric (an inner code) for protection of a portion of the frame (the inner code protects groups of columns of the interleaved array of outer coded data, hence is an inner quality metric for protection of column portions of the frame).

The Applicant contends, "Kashida does not disclose or suggest that the outer code check digit is for protection of a frame and the inner code check digit is for protection of a portion of the respective frame".

Kashida explicitly teaches the an outer code check digit is for protection of an error correction block and the inner code check digit is for protection of a portion of the respective error correction block (See figure 9). Wright teaches a frame structure for transporting an entire error correction block.

The Applicant contends, "Applicants respectfully submit that Kashida does not teach, suggest, or provide any motivation for a method as claimed in claim 9 of the present application". The motivation is inherent in the art since one of ordinary skill in the art at the time the invention was made would have known that product codes are used to protect the data in an error correction block and in the case of the Wright patent to protect frame data. One of ordinary skill in the art at the time the invention was made

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would have been highly motivated to combine the two arts, the Kashida patent and the Wright patent, to provide error protection to the frames in Wright.

The Examiner disagrees with the applicant and maintains all Prior Art rejections of amended claims 9 and previously examined claims 10-34. All amendments and arguments by the applicant have been considered. It is the Examiner's conclusion that amended claims 9 and previously examined claims 10-34 are not patentably distinct or non-obvious over the prior art of record in view of the references, Kashida, Motokazu et al. (US 4779276 A), Wright, David A. (US 6445702 B1) and Matsukuma, Hiroshi et al. (US 5905741 A) as applied in the last office action, Paper No. 13. Therefore, the rejection is maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 9-20 and 22-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kashida, Motokazu et al. (US 4779276 A, hereafter referred to as Kashida) in view of Wright, David A. (US 6445702 B1).
See Paper No. 13 for detailed action of prior rejections.

4. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kashida, Motokazu et al. (US 4779276 A, hereafter referred to as Kashida) and Wright, David A. (US 6445702 B1) in view of Matsukuma, Hiroshi et al. (US 5905741 A, hereafter referred to as Matsukuma).
See Paper No. 13 for detailed action of prior rejections.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

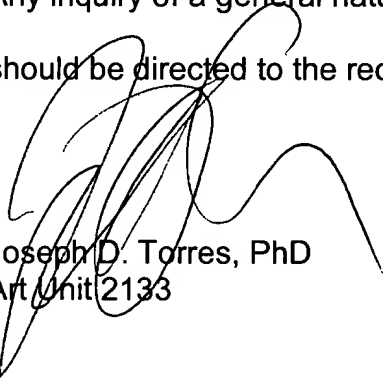
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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

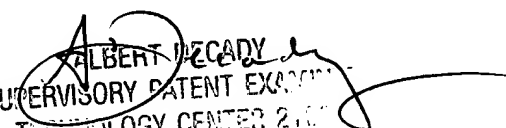
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Torres whose telephone number is (703) 308-7066. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (703) 305-9595. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-746-7240.



Joseph D. Torres, PhD
Art Unit 2133



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